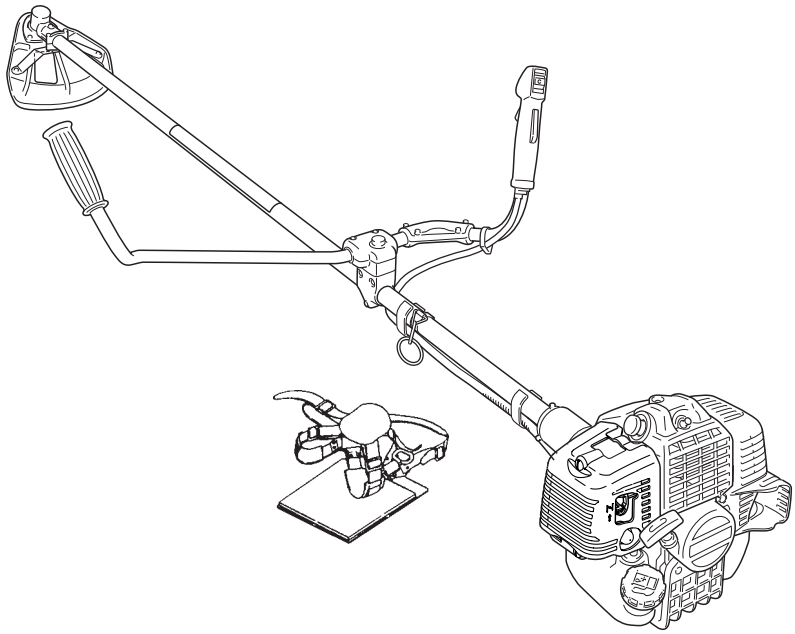


OPERATOR'S MANUAL
TRIMMER/ BRUSHCUTTER

SRM-400U

CAUTION

Read Rules for Safe Operation and Instruction Carefully

ECHO POWER EQUIPMENT (CANADA)
501 Newbold Street, London, Ontario Canada N6E 1K4

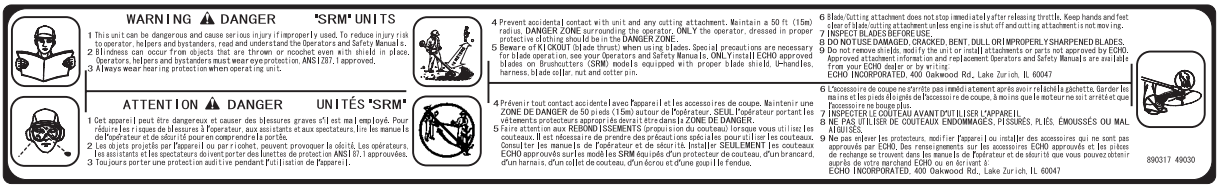
X750-005 25 4
X750 216-170 4
Printed in Japan 0705rd 0493 ES

INTRODUCTION

The ECHO Trimmer/Brushcutter, model SRM-400U is lightweight, high performance gasoline powered rotary trimmer which is designed for brushcutting, weed control and grass trimming in areas which are difficult to control by any other means. The trimmer is equipped with a safety shoulder harness, and the excellent balance characteristics plus the available power, ensures comfortable operation.

This manual provides the information necessary for assembly, adjustment, operation and maintenance of your unit.

Locate this safety decal on your unit. The complete unit illustration found in the “NOMENCLATURE” section, will help you locate them. Make sure the decal is legible and that you understand and follow the instructions on them. If a decal cannot be read, a new one can be ordered from your ECHO dealer.


WARNING ⚠ DANGER "SRM" UNITS
1 This unit can be dangerous and cause serious injury if improperly used. To reduce injury risk to operator, helpers and bystanders, read and understand the Operators and Safety Manuals.
2 Blindness can occur from objects that are thrown or ricochet even with shield in place. Operators, helpers and bystanders must wear eye protection. ANSI Z87.1 approved.
3 Always wear hearing protection when operating unit.
4 Prevent accidental contact with unit and any cutting attachment. Maintain a 50 ft (15m) radius, DANGER ZONE surrounding the operator, ONLY the operator, dressed in proper protective clothing should be in the DANGER ZONE.
5 Beware of KICKOUT (blade thrust) when using blades. Special precautions are necessary for blade operation, see your Operators and Safety Manuals. ONLY install ECHO approved blades on Brushcutters (SRM) models equipped with proper blade shield, T-handles, harness, blade collar, nut and cotter pin.
6 Blade/Cutting attachment does not stop immediately after releasing throttle. Keep hands and feet clear of blade/cutting attachment unless engine is shut off and cutting attachment is not moving.
7 INSPECT BLADES BEFORE USE.
8 DO NOT USE DAMAGED, CRACKED, BENT, DULL OR IMPROPERLY SHARPENED BLADES.
9 Do not remove shields, modify the unit or install attachments or parts not approved by ECHO. Approved attachment information and replacement Operators and Safety Manuals are available from your ECHO dealer or by writing:
ECHO INCORPORATED, 400 Oakwood Rd., Lake Zurich, IL 60047
ATTENTION ⚠ DANGER UNITÉS "SRM"
1 Cet appareil peut être dangereux et causer des blessures graves s'il est mal employé. Pour réduire les risques de blessures à l'operateur, aux assistants et aux spectateurs, lire les manuels de l'opérateur et de sécurité pour en comprendre la portée.
2 Les objets projetés par l'appareil ou par ricochet, peuvent provoquer la cécité. Les opérateurs, les assistants et les spectateurs doivent porter des lunettes de protection ANSI Z87.1 approuvées.
3 Toujours porter une protection auditive pendant l'utilisation de l'appareil.
4 Prévenir tout contact accidentel avec l'appareil et les accessoires de coupe. Maintenir une ZONE DE DANGER de 50 pieds (15m) autour de l'opérateur. SEUL l'opérateur portant les vêtements protecteurs appropriés devrait être dans la ZONE DE DANGER.
5 Faire attention aux REBONDISSEMENTS (propulsion du couteau) lorsque vous utilisez les couteaux. Il est nécessaire de prendre des précautions spéciales pour utiliser les couteaux. Consulter les manuels de l'opérateur et de sécurité. Installer SEULEMENT les couteaux ECHO approvés sur les modèles SRM équipés d'un protecteur de couteau, d'un brancard, d'un harnais, d'un collet de couteau, d'un écrou et d'une goupille fendue.
6 L'accessoire de coupe ne s'arrête pas immédiatement après avoir relâché la gâchette. Garder les mains et les pieds éloignés de l'accessoire de coupe, à moins que le moteur ne soit arrêté et que l'accessoire ne bouge plus.
7 INSPECTER LE COUTEAU AVANT D'UTILISER L'APPAREIL.
8 NE PAS UTILISER DE COUTEAUX ENDOMMAGÉS, FISSURÉS, PLIÉS, ÉMOUSSÉS OU MAL AIGUISÉS.
9 Ne pas enlever les protecteurs, modifier l'appareil ou installer des accessoires qui ne sont pas approuvés par ECHO. Des renseignements sur les accessoires ECHO approuvés et les pièces de rechange se trouvent dans les manuels de l'opérateur et de sécurité que vous pouvez obtenir auprès de votre marchand ECHO ou en écrivant à:
ECHO INCORPORATED, 400 Oakwood Rd., Lake Zurich, IL 60047
890317 49030

Safety decal: Part number 890317-49030

Safety decal: Part number 890177-51330

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This spark ignition system complies with Canadian ICES-002.

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RULES FOR SAFE OPERATION

SAFETY INSTRUCTIONS

1. **Do Not** operate the unit when you are fatigued.
2. **Do Not** operate if other people or animals are in the work area.
3. **Do Not** operate the unit without the shield correctly in position.
4. **Do Not** operate in a confined area. Carbon monoxide exhaust gas is highly poisonous.
5. **Do Not** operate the unit while you are smoking.
6. **Always** wear eye protection goggles when operating the unit.
7. **Always** hold the unit firmly with both hands and with fingers and thumbs encircling the handles.
8. **Always** obey local ordinances regulating the use of internal combustion engines in your area.
9. **Always** use the cutting attachments as approved and supplied by ECHO POWER EQUIPMENT (CANADA) for your unit.
10. **Always** remain alert when operating the unit to avoid possible injury to yourself and other people.
11. **Always** wear the shoulder harness when operating the unit.
12. **Do not** operate the unit while under the influences of drugs or alcohol.

ATTENTION

For your protection when operating this unit, comply with all Safety Rules as listed in the Operator's Manual. (Replacement manuals are available from your ECHO dealer.)

1. Do not operate unless the debris shield and safety harness are in good condition and properly installed.
2. Do not operate if other persons or animals are in the work area.
3. Do not operate without eye protection goggles available from your ECHO dealer.

WARNING ⚠ DANGER

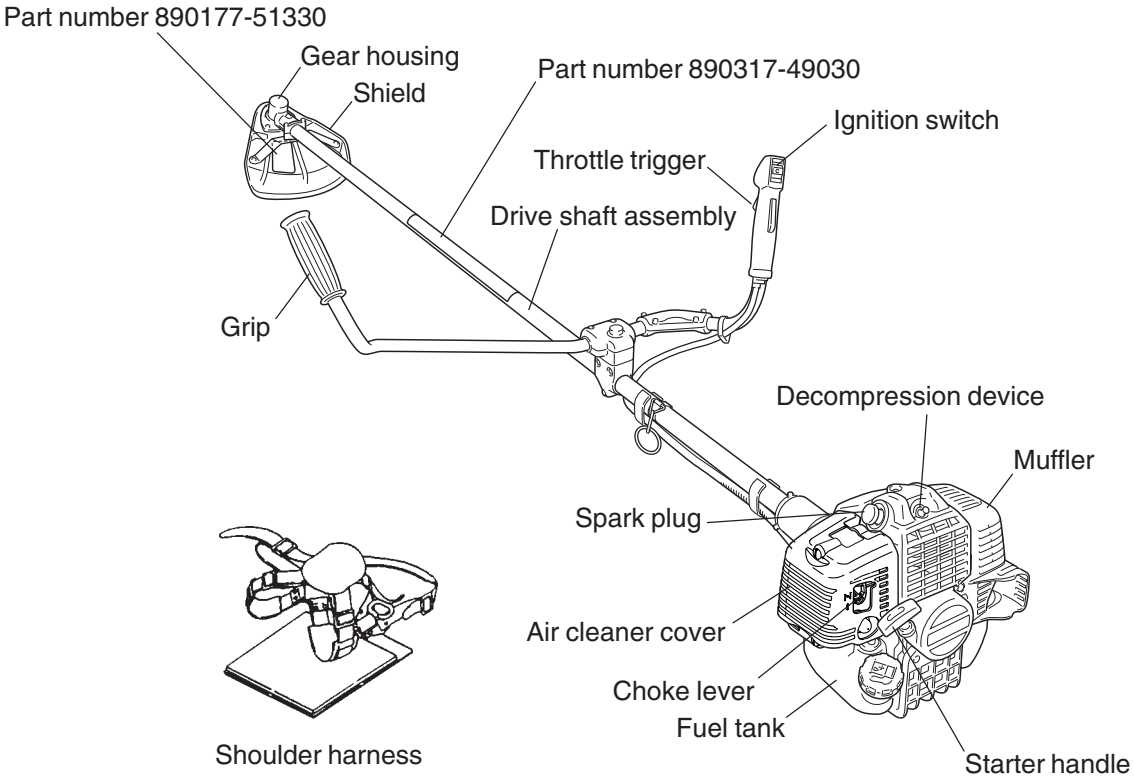
1. **Do Not** smoke while handling gasoline.
2. **Do Not** refuel a hot engine. Wait unit it cools.
3. **Do Not** overfill the tank. Spilled fuel must be wiped up.
4. **Always** stop the engine when refueling.
5. **Always** remove the fuel cap slowly in order to relieve any pressure build up in the tank.
6. **Always** restart the engine at least 3 m away from the refueling point.
7. **Always** store gasoline in an approved container.

WARNING ⚠ DANGER

SERIOUS INJURY MAY RESULT FROM THE IMPROPER USE OF STEEL BLADES. COMPLY WITH ALL SAFETY INSTRUCTIONS LISTED IN THE OPERATOR'S MANUAL AND SUPPLIED WITH THE BLADES.

1. **THE ECHO SAW TOOTH BLADE IS DESIGNED TO CUT BRUSH AND SMALL TREES.**
2. **THE ECHO 8 TOOTH ROTARY KNIFE BLADE IS DESIGNED TO CUT HEAVY WEEDS AND GRASS. TO AVOID INJURY DUE TO KICK BACK OR BLADE FRACTURE, DO NOT USE THIS BLADE TO CUT BRUSH OR TREES.**
3. **ECHO WILL NOT BE RESPONSIBLE FOR THE FAILURE OF CUTTING DEVICES WHICH HAVE NOT BEEN TESTED AND APPROVED BY ECHO FOR USE WITH THIS UNIT.**

NOMENCLATURE OF PARTS

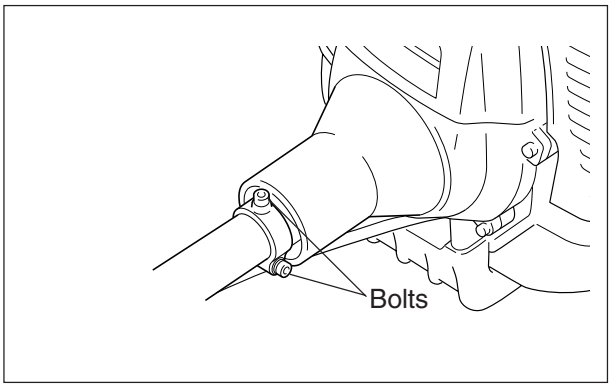


TECHNICAL DATA

			SRM-400U
Dimension	L × W × H	cm	186 × 70× 43 (73.2 in × 27.6 in × 16.9 in)
Mass		kg	9.9 (21.8 lb): without shoulder harness and cutter head
Engine	Type		Air cooled two stroke single cylinder
	Displacement	mL (cm^3)	42.7 (2.6 cu.in)
	Maximum revolution	r/min	10,000
	Carburetor		Walbro diaphragm type WYK
	Ignition		Flywheel magneto: CDI (Capacitor Discharge Ignition) system
	Spark plug		CHAMPION RCJ-6Y
	Starter		Recoil starter
	Clutch		Automatic centrifugal clutch
Fuel	Mixing ratio		50 : 1 ratio with ECHO Power Blend X™, ISO-L- EGD (ISO/CD 13738) and JASO M345-FC/FD two-stroke, air-cooled engine oil.
	Gasoline		Use 89 octane unleaded. Do not use fuel containing methyl alcohol, more than 10 % ethyl alcohol or 15 % MTBE. Do not use alternative fuels such as E-20 or E-85.
	Tank capacity	L	1.0 (33.8 US fl. oz.)
Drive shaft assembly	Cutter (Option)		Nylon line cutter head
	Cutter		Circular saw, 25 cm (10 in)
	Cutter (Option)		8 cutter blade, 20 cm (8 in)
	Gear housing		60 degree bevel gears, ratio 1 : 1.33 (Counterclockwise)
	Lubrication		Good quality lithium grease
	Drive shaft		High tensile solid steel, 5 bearings
	Shield		Metal shield mounted on the gear housing for nylon line and metal blade applications.

Technical data subject to change without notice.

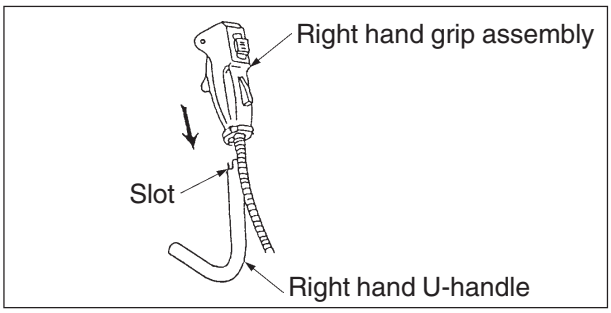
ASSEMBLING



DRIVE SHAFT

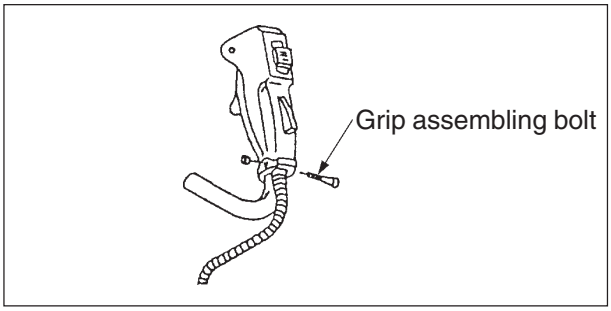
- Stand engine upright on a level floor.
- Loosen bolts at drive shaft end of the engine.
- Fit drive shaft assembly ensuring that the drive shaft is correctly engaged.
- Tighten bolts to fasten drive shaft assembly.

WARNING ⚠ DANGER
NEVER START ENGINE WITHOUT DRIVESHAFT ASSEMBLY INSTALLED. THIS COULD RESULT IN SERIOUS INJURY.

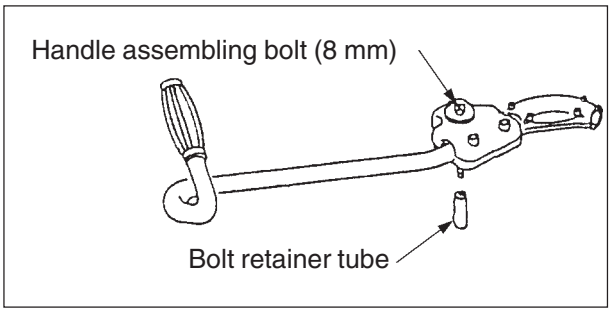


HANDLE

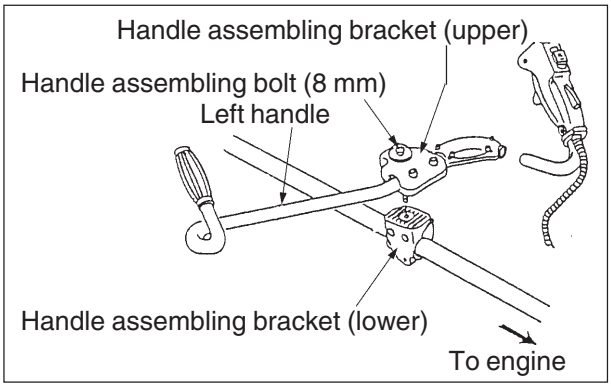
Insert right hand grip assembly into right hand U-handle and fit it to the slot for rotation prevention of right hand U-handle.



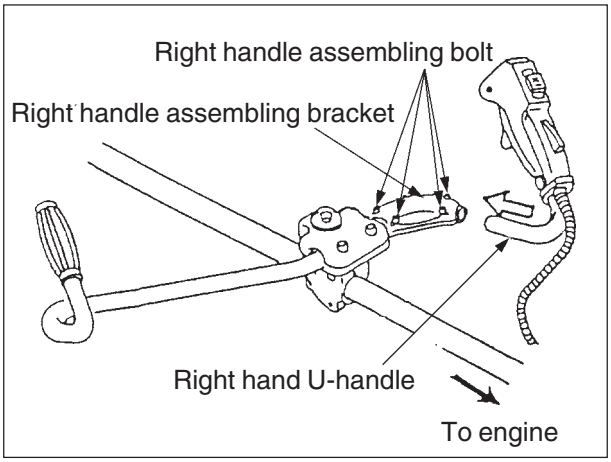
Fit grip assembling bolt and secure the grip firmly.



Remove bolt retainer tube from end of handle assembling bolt (8 mm).

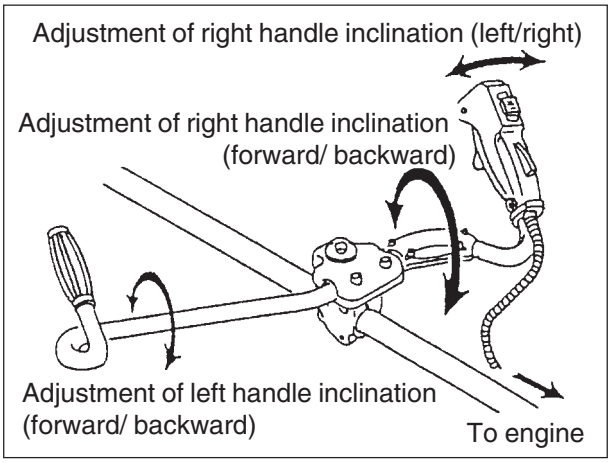


Install handle assembling bracket (upper) in handle assembling bracket (lower) and fix handle by tightening handle assembling bolt (8 mm) lightly.

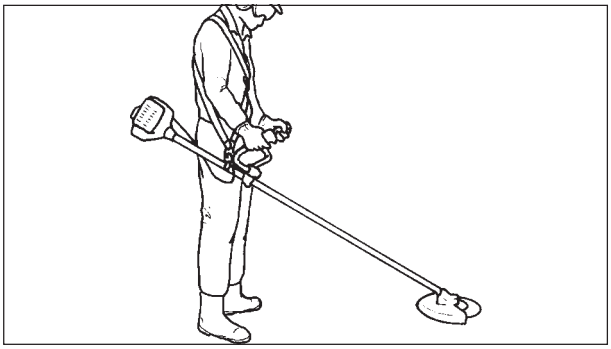


Loosen 4 right handle assembling bolts and insert right hand U-handle into right handle assembling bracket. (toward direction of arrow ⇦)

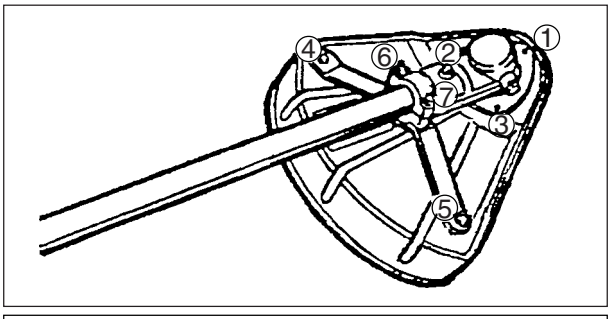
Fix the right hand U-handle by tightening 4 right handle assembling bolts lightly.



Adjust each inclination of right and left handles to adequate position (easy to operate) and tighten firmly handle assembling bolt (8 mm) and 4 right handle assembling bolts.

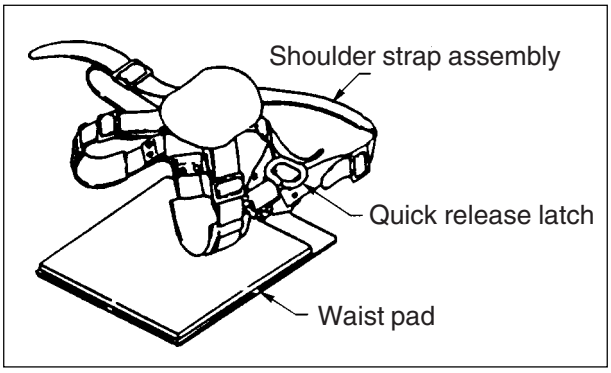


Determine “Easy to operate” position.



SHIELD

Fit the shield on the gear housing and tighten screws with washers (Seven points) as shown.



SHOULDER HARNESS

- Fit the shoulder strap to the swivel hook, and adjust the length of strap and or the location clamps to maintain the cutter head parallel to the ground.

OPERATION

⚠ WARNING

ALTERNATIVE FUELS, SUCH AS E-20 (20 % ETHANOL), E-85 (85 % ETHANOL) OR ANY FUELS NOT MEETING ABOVE REQUIREMENTS ARE NOT APPROVED FOR USE IN ECHO 2-STROKE GASOLINE ENGINES.
USE OF ALTERNATIVE FUELS MAY CAUSE PERFORMANCE PROBLEMS, LOSS OF POWER, OVERHEATING, FUEL VAPOR LOCK, AND UNINTENDED MACHINE OPERATION, INCLUDING, BUT NOT LIMITED TO, IMPROPER CLUTCH ENGAGEMENT.
ALTERNATIVE FUELS MAY ALSO CAUSE PREMATURE DETERIORATION OF FUEL LINES, GASKETS, CARBURETOR AND OTHER ENGINE COMPONENTS.

Fuel Mix Chart 50 : 1

Gasoline	Oil
L	mL
4	80
8	160
20	400

IMPORTANT

- ECHO premium Power Blend X™ Universal 2-Stroke Oil may be mixed at 50 : 1 ratio for application in all ECHO engines sold in the past regardless of ratio specified in those manuals.
- Use of unmixed, improperly mixed, or fuel older than 90 days, (stale fuel), may cause hard starting, poor performance, or severe engine damage and void the product warranty. Read and follow instructions in the Storage section of this manual.

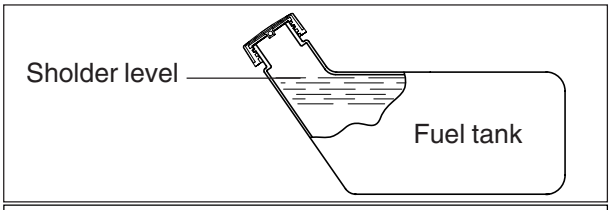
GENERAL CHECK

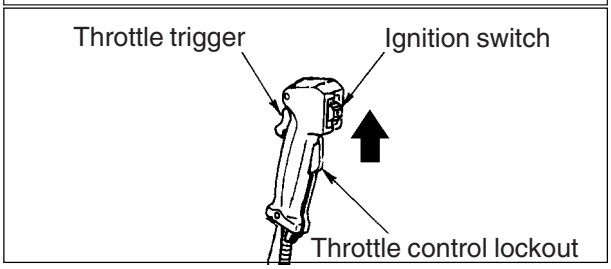
- Eneure that all nuts, screws and bolts installed are properly tightened.

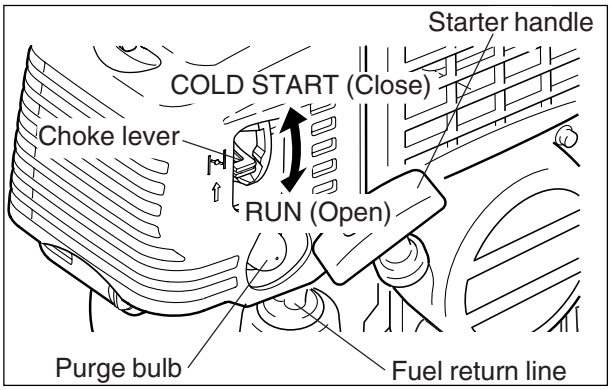
FUEL STATEMENT

GASOLINE - Use 89 Octane [(R+M)/2] (mid grade or higher) gasoline or gasohol known to be good quality.
Gasohol may contain up to 10 % Ethyl (grain) alcohol or 15 % MTBE (methyl teriary-butyl ether). Gasohol containing methyl (wood) alcohol is **NOT** approved.

TWO-STROKE OIL - A two-stroke engine oil meeting ISO-L-EGD (ISO/CD 13738) and JASO M345-FC/FD Standards must be used. ECHO brand premium Power Blend X™ Universal 2-Stroke Oil meets these standards. Engine problems due to inadequate lubrication caused by failure to use an ISO-L-EGD (ISO/CD 13738) and JASO M345-FC/FD certified oil, such as ECHO premium Power Blend X™, will void the two-stroke engine warranty. (Emission related parts only are covered for two years, regardless of two-stroke oil used, per the statement listed in the Emission Defect Warranty Explanation.)







NOTE

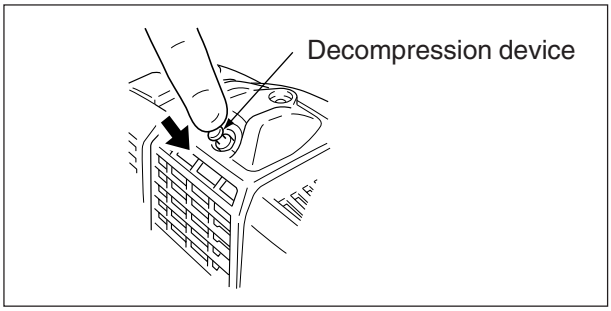
Starter handle: Use short pulls - only 1/2 - 2/3 of starter rope for starting. Do not let starter rope snap back in .
Always hold the unit firmly.

STARTING COLD ENGINE

WARNING ⚠ DANGER

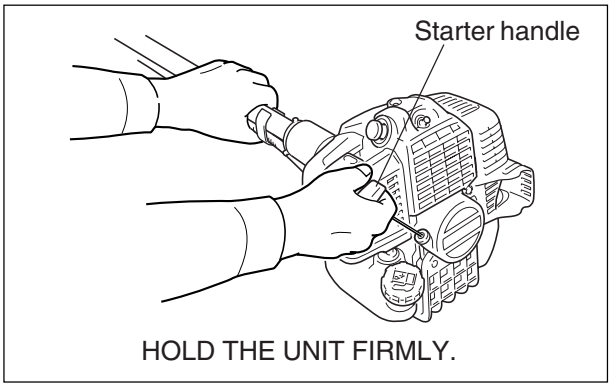
- **WHEN ENGINE IS STARTED, CONFIRM IF THERE IS NOT ANY ABNORMAL VIBRATION OR SOUND. IF THERE IS ABNORMAL VIBRATION OR SOUND, ASK YOUR DEALER TO REPAIR.**
- **AFTER REFUELING TIGHTEN FUEL CAP FIRMLY AND CHECK FOR LEAKAGE. IN CASE OF FUEL LEAKAGE REPAIR BEFORE STARTING OPERATION SINCE THERE IS A DANGER OF FIRE.**

- It is not permitted to fill fuel above the shoulder level of fuel tank.
- Slide switch to START/RUN position as shown.
- Push purge bulb 3 or 4 times (or until constant flow of fuel is visible in fuel return line.)
- Move choke lever to COLD START (Close) position.
- Press the decompression device.
- Pull starter handle until the engine fires. Now, move choke lever to RUN (open) position, and if necessary, restart the engine again and allow to warm up for a few minutes before using.
- After idling, gradually open throttle and cutter blade will start to operate as the engine attains clutch engagement speed of 3,500 r/min approximately.

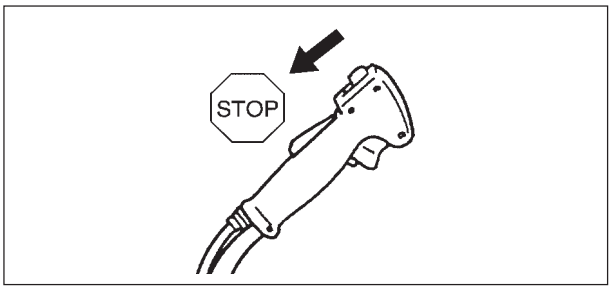


STARTING WARM ENGINE

- Press the decompression device.
- When engine is warm, start it by pulling starter handle with switch positioned at START/RUN. (Keep choke lever in RUN (open) position)
- If engine does not start in a few tries, follow same procedures as starting a cold.

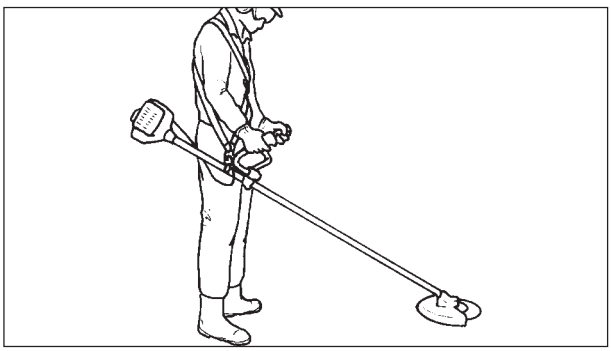


HOLD THE UNIT FIRMLY.



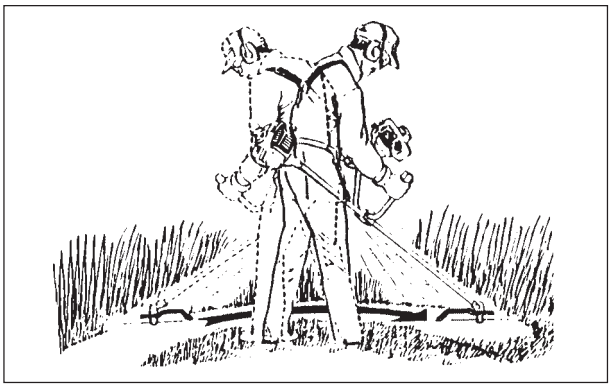
STOPPING ENGINE

- Release throttle trigger and allow to run at an idle speed.
- Slide ignition switch to “STOP” position.



OPERATING THE TRIMMER

- Adjust handle to a convenient position for cutting as instructed on page 6.
- Allow the engine to warm up at a fast idle for a few minutes.
- Increase engine speed as necessary.
- When mowing shrubs, weeds, or grass, swing the cutter head from right to left as you move forward.
  - Avoid striking any obstruction such as rocks, stones or tree stumps which can damage the cutter head.
    Do not cut into the ground.
  - To avoid damage to the engine, do not run the engine unloaded at full throttle.
- In the event that the cutter strikes an obstruction or is otherwise prevented from rotating in normal operation, the clutch will slip to prevent possible engine damage. In this case, stop the engine, free the cutter and then start the operation again.



WARNING ⚠ DANGER

DO NOT ALLOW EITHER PEOPLE OR ANIMALS INTO THE WORK AREA.
ALWAYS WEAR SAFETY GOGGLES WHEN CUTTING.
DRESS PROPERLY - AVOID LOOSE CLOTHING.
WHEN GRASS OR WEEDS HAVE CLOGGED THE CUTTER HEAD AFFECTING NORMAL OPERATION, FIRST, STOP THE ENGINE AND THEN REMOVE THE DEBRIS.

WARNING ⚠ DANGER

- **BEFORE STARTING UP THE ENGINE, MAKE SURE THAT THE CUTTER BLADE IS NOT CONTACTING ANYTHING.**
- **WHEN TWO OR MORE OPERATORS ARE WORKING TOGETHER, ENSURE THAT A SAFE DISTANCE IS KEPT BETWEEN THEM.**

OPERATING INSTRUCTIONS (METAL BLADES and OPTIONAL NYLON LINE)

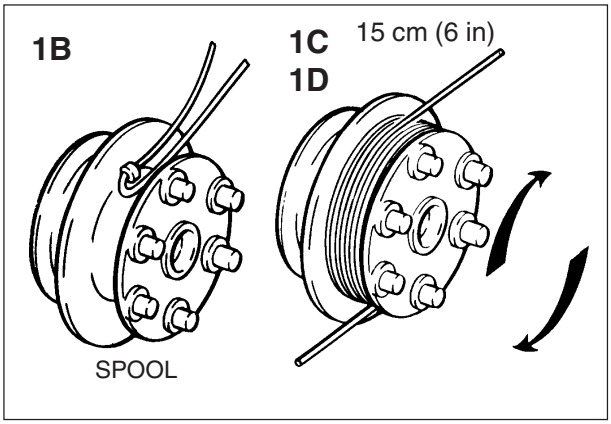
Your brushcutter/trimmer, has been designed and constructed to give you years of trouble-free service and relieve you of the many back-aching tasks normally associated with grass trimming, weed control and brushcutting. Nevertheless, in common with all other power operated tools, the Owner and/or Operator has a definite responsibility to maintain the safe working condition of the unit as provided by the manufacturer, and to ensure also the safe operating procedures as prescribed by common sense and this manual. Please, therefore, read and understand the instructions as listed hereunder, and on Page 3, in order to prevent accidents and possible injury.

WARNING ⚠ DANGER

GRASS/WEED TRIMMERS CAN THROW GRAVEL, STONE, WOOD CHIPS, GLASS, AND PLASTIC OR METAL OBJECTS. THE DEBRIS SHIELD BEHIND THE TRIMMER HEAD STOPS MUCH OF THE DEBRIS, BUT CANNOT PREVENT THE OPERATOR FROM BEING STRUCK BY SOME DEBRIS. READ THE RULES FOR SAFE OPERATION IN THE OPERATOR'S MANUAL THAT YOU RECEIVED WITH YOUR ECHO TRIMMER. AISO, FOLLOW AII INSTRUCTIONS IN THIS INSTRUCTION SHEET.

ECHO 2-LINE MANUAL TRIMMER HEAD (OPTION)

1. Read the Operator's Manual carefully.
   Be throughly familiar with the controls and proper use of the trimmer.
   Know how to stop the unit and disengage the controls.
2. Never allow children to operate the trimmer.
3. Never allow adults to use the trimmer unless they have received proper instructions. Be sure the operator is properly attired and wears the type of foot, leg, head, eye and ear protection recommended both in your ECHO Operator's Manual and by your ECHO Servicing Dealer.
4. Always wear eye protection that conforms to ANSI Z 87. 1-2000.



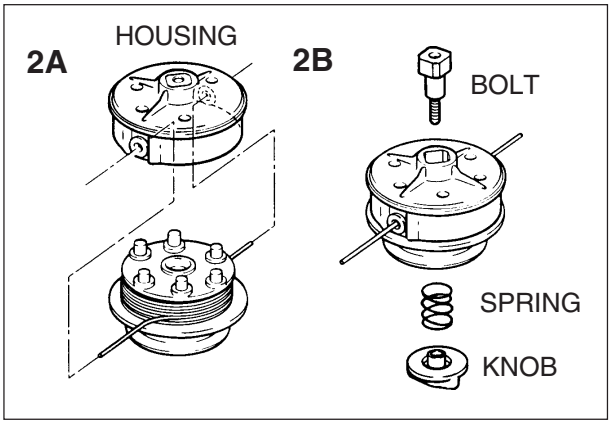
1. REPLACING LINE

A. Remove spool by turning knob clockwise, “right”, and separating parts.

B. Thread a 6 m (20 feet) length of 2.4 mm (0.095 in) or 2.7 mm (0.105 in) ECHO line through hole in spool so that ends are the same length.

C. Wind both ends of line tightly and evenly clockwise (see arrows on spool), and wind from side to side without twisting the lines.

D. Secure ends of line temporarily with about 15 cm (6 in) extending out.



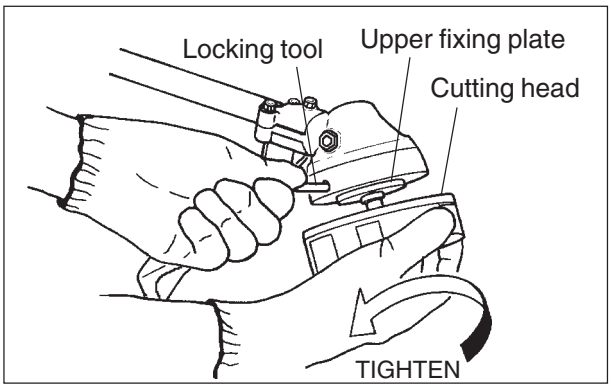
2. REPLACING SPOOL

NOTE
Keep line tight on spool.

A. Snap spool into housing while pulling line through eyelets with about 15 cm (6 in) extending out.

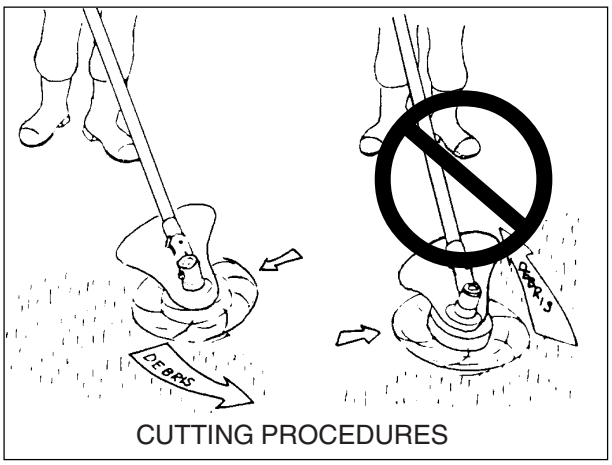
CAUTION
Knob tightens counterclockwise, “left”.

B. Fasten spool to housing with shaft bolt, spring, and knob.



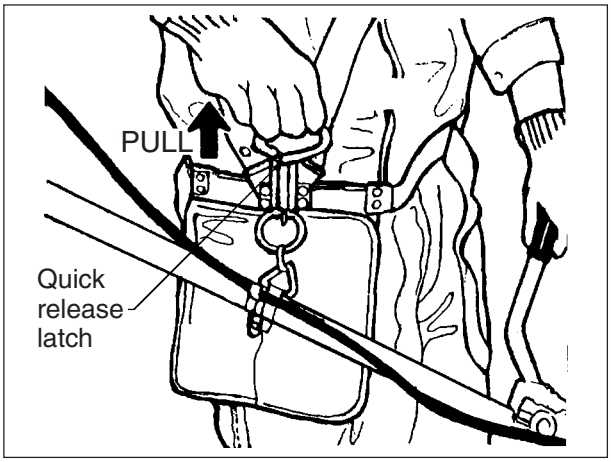
INSTALLATION OF NYLON LINE HEAD (OPTION)

Set the nylon line head to the drive shaft and tighten by turning as shown.



OPERATING INSTRUCTIONS NYLON LINE

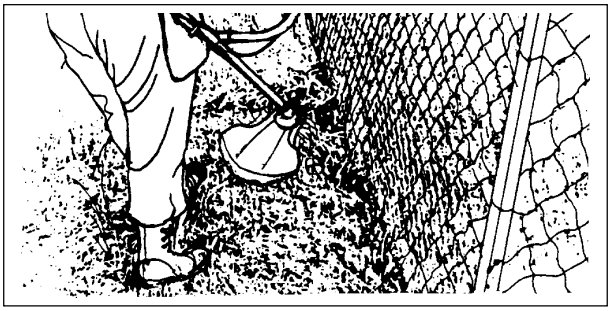
1. Always use the end of the line for cutting. Forcing the cutter head too close to the work will result in reduced efficiency and broken line.
2. Maintain the line at the recommended length of 12.5 to 15 cm (5 to 6 in).
   A longer line will reduce engine speed, a shorter line may result in engine damage.
3. The trimmer head rotates counterclockwise. Always cut with the head tilted to the right to deflect debris away from the operator.
4. Always observe the SAFETY RULES on Page 3 when using the unit.



SHOULDER HARNESS

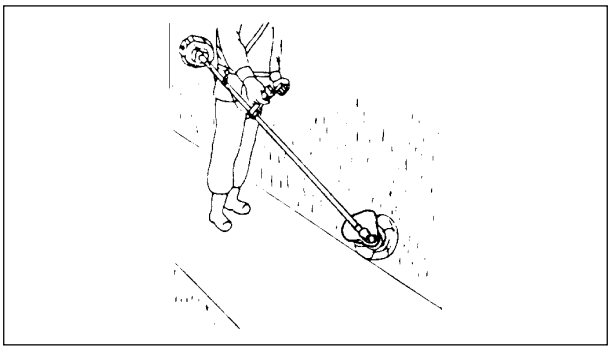
- Install the harness over the both shoulders and adjust shoulder straps so that the quick release latch rests low on the right hand side.
- Attach the trimmer/brushcutter to the harness by means of the quick release latch.
- Make some practice sweeps as with a trimmer and readjust the harness as necessary for comfort and to maintain the cutter parallel to the ground.

WARNING ⚠ DANGER
IN CASE OF EMERGENCY, PULL THE QUICK RELEASE LATCH TO DISCONNECT THE TRIMMER FROM THE HARNESS.



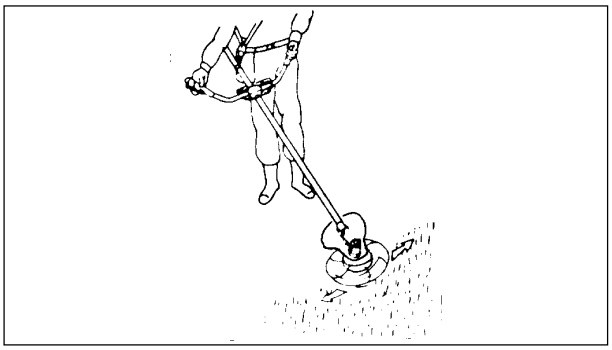
TRIMMING

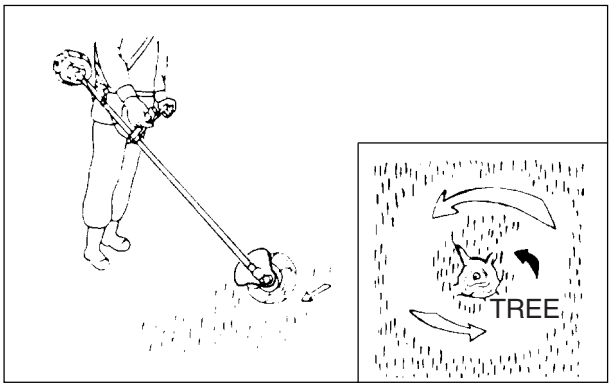
The nylon line will allow you to trim along walls and fence lines. Always try to trim from right to left, walking behind the unit and parallel to the wall or fence, thus deflecting debris away from the operator.

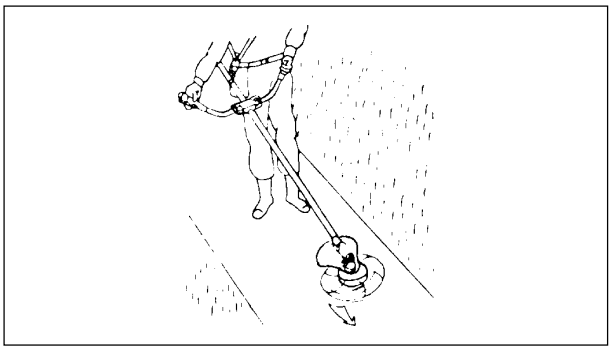


EDGING

1. The nylon line is intended only to cut grass and should not be used to cut a normal edging trench along stone or concrete driveway etc.
2. Tilt the unit vertically as illustrated and use only the line tip to remove unwanted growth.







MOWING

- The nylon line will effectively mow large areas of heavy grass and/or weeds. Use the standard 12.5 to 15 cm (5 to 6 in) of line and operate at full throttle.
- When mowing cultivated areas such as lawns hold the cutter head parallel to the ground to avoid scalping.

SCALPING

1. The cleaning of weeds and grass right down to the earth can be accomplished very easily with the nylon line.
2. Scalping around trees and brushes is particularly effective, but care should be exercised not to bruise the bark of young and sensitive growth.
3. In flower beds, always remember that the nylon line will cut in a complete circle to avoid cutting flowers instead of weeds.

SWEEPING

1. Sweeping grass and other debris from a hard surface can be done very quickly.

STEEL BLADE OPERATIONS

Your ECHO Trimmer/Brushcutter is designed for fast, efficient weed and brush control in areas which are otherwise inaccessible to power equipment. Standard configuration includes a handle bar and nylon line head for light trimming and weed clearing. Two special steel blades are available as options and recommended for use in extended heavy weed and brush clearing operations: —

1.Blade: weed and grass 8 tooth 20 cm (8 in) diameter

2.Blade: brush 80 tooth 25 cm (10 in) diameter

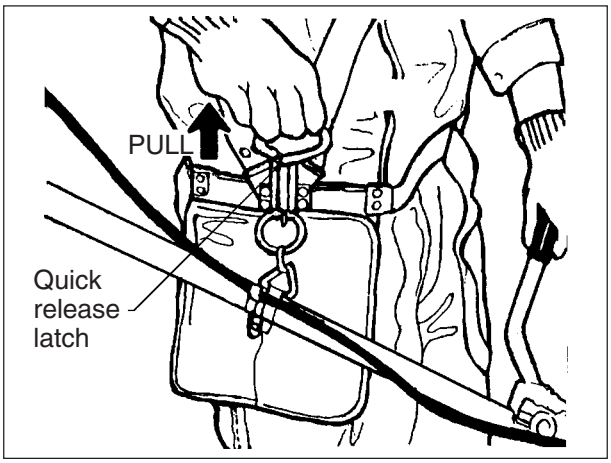
WARNING ⚠ DANGER

1. SERIOUS INJURY MAY RESULT FROM THE IMPROPER USE OF STEEL BLADES. READ AND COMPLY WITH SAFETY INSTRUCTIONS LISTED IN THIS MANUAL.
2. THE EIGHT TOOTH BLADE IS DESIGNED SPECIALLY TO CUT WEED AND GRASS. TO AVOID INJURY DUE TO KICKBACK OR BLADE FRACTURE, DO NOT USE THIS BLADE TO CUT BRUSH OR TREES.
3. ECHO WILL NOT BE RESPONSIBLE FOR THE FAILURE OF CUTTING DEVICES WHICH HAVE NOT BEEN TESTED AND APPROVED BY ECHO FOR USE WITH THIS UNIT.

WARNING ⚠ DANGER

SAFETY PRECAUTIONS

1. **ALWAYS USE THE CORRECT BLADE FOR THE JOB AS RECOMMENDED.**
2. **BE CAREFUL NOT TO HIT ROCKS, STONES, TREE STUMPS OR ANY FOREIGN OBJECT WHICH MAY DAMAGE THE BLADE.**
3. **DO NOT CUT INTO THE GROUND TO AVOID DULLING THE BLADE.**
4. **ALWAYS STOP THE ENGINE AND EXAMINE THE BLADE AFTER STRIKING AN OBSTRUCTION.**
   DO NOT OPERATE WITH A BLADE WHICH IS BLUNT, BENT, FRACTURED, OR DISCOLORED DUE TO OVERHEAT.
5. **IN THE EVENT, THAT THE BLADE STRIKES AN OBSTRUCTION, OR IS OTHERWISE PREVENTED FROM ROTATING IN NORMAL OPERATION, THE CENTRIFUGAL CLUTCH WILL SLIP TO PREVENT ENGINE DAMAGE.**
   IN THIS CASE, STOP THE ENGINE, FREE AND EXAMINE THE BLADE AND IF IN GOOD ORDER, RESUME OPERATION.
6. **SHOULD THE BRUSHCUTTER BE OPERATED FOR AN EXTENDED PERIOD OF HIGH TEMPERATURES, THE GEAR BOX MAY BECOME VERY HOT.**
   IF TOO HOT TO TOUCH, ALLOW THE UNIT TO COOL DOWN, CHECK THE LUBRICATION AS PER "MAINTENANCE" AND CONTINUE TO OPERATE IF IN ORDER.
7. **TO AVOID ENGINE DAMAGE, DO NOT RUN ON FULL THROTTLE WITHOUT LOAD.**
8. **DO NOT OPERATE THE BRUSHCUTTER WITHOUT THE HARNESS AND DEBRIS SHIELD CORRECTLY FITTED.**
9. **ALWAYS INSPECT THE WORK AREA AND REMOVE ANY FOREIGN OBJECTS.**



SHOULDER HARNESS

- Install the harness over the both shoulders and adjust shoulder straps so that the quick release latch rests low on the right hand side.
- Attach the trimmer/brushcutter to the harness by means of the quick release latch.
- Make some practice sweeps as with a scythe and readjust the harness as necessary for comfort and to maintain the cutter parallel to the ground.

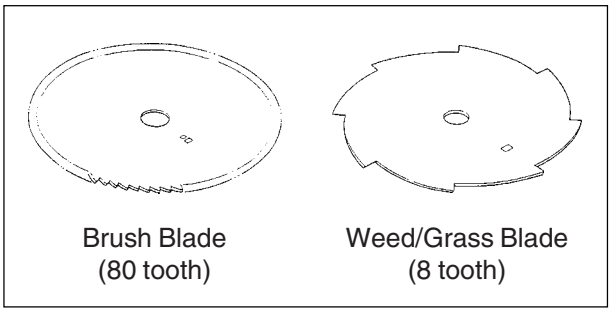
WARNING ⚠ DANGER

IN CASE OF EMERGENCY, PULL THE QUICK RELEASE LATCH TO DISCONNECT THE TRIMMER FROM THE HARNESS.

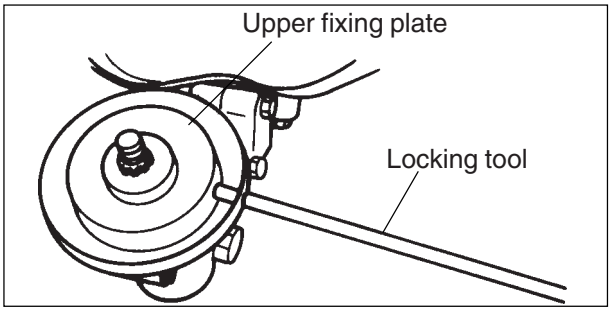
SHIELD

When using a metal blade. Use same as Nylon line.

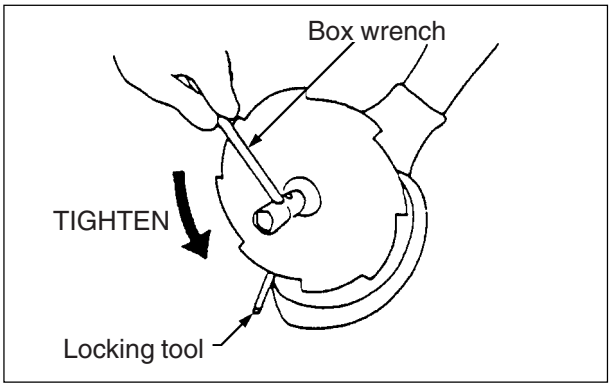
INSTALLING THE BLADE



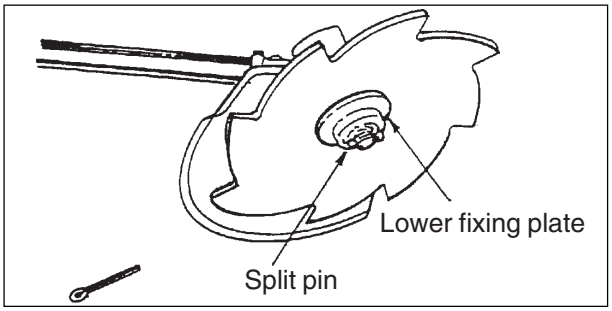
1. The installation of the 8 tooth weed/grass blade (option) and the 80 tooth brush is exactly the same.



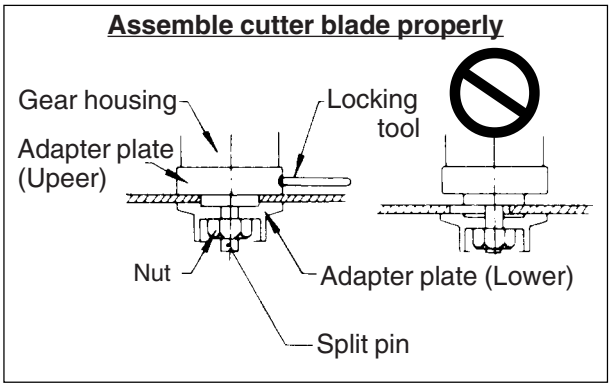
2. Rotate the drive shaft until the holes in the upper fixing plate and the gear box are aligned. Insert the locking tool.



3. Remove the nylon line line head, if fitted, by turning in a clockwise direction.
4. Install the blade ensuring that it is centered correctly on the fixing plate.
5. Fit the lower fixing plate and tighten the locking nut using the box wrench supplied in the tool kit.
   - Never fasten while applying your weight. Otherwise the thread of nut could be broken.

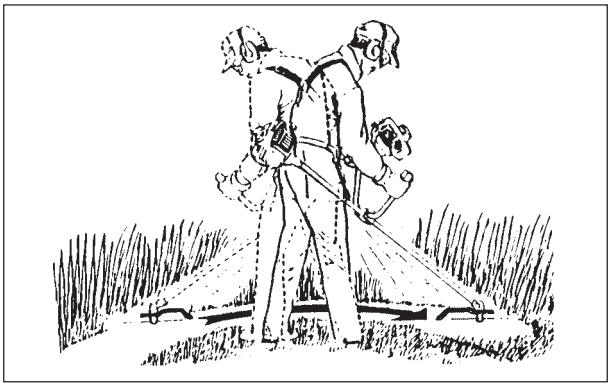


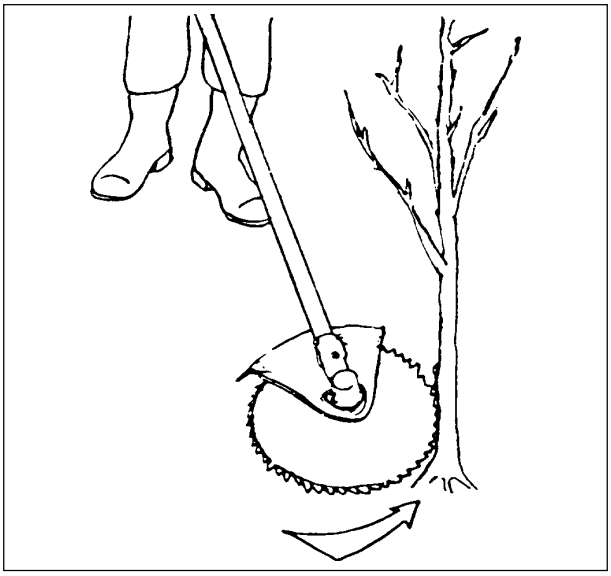
6. Fit a new split pin as supplied in the tool kit to secure the locking nut.



NOTE

- The drive shaft is fitted with left hand threads, therefore turn counterclockwise to tighten as illustrated.
- Always use a new split pin to secure the locking nut.
  Split pin 2 × 22 mm
  Part No. 898502-01130.





HEAVY WEED CUTTING

- Install the 8 tooth 20 cm (8 in) blade. (option)
- Observing all precautions as listed in this manual, start the engine and using full throttle, swing the blade in an arc as you move forward slowly. The cutter rotates counterclockwise and the debris will be pushed backwards so the work area will always be visible.

BRUSHCUTTING

- Install the 80 tooth blade.
- Proceed exactly as for weed and grass cutting.

SMALL TREES

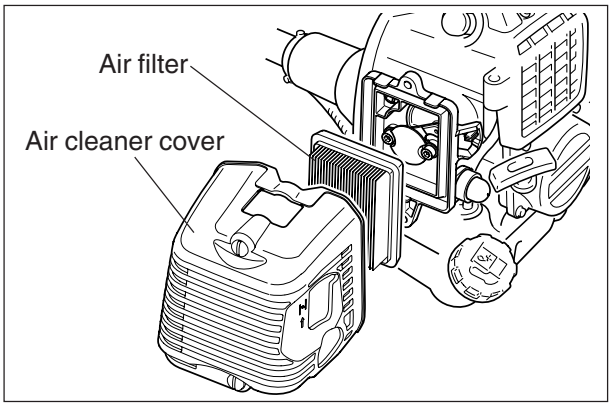
- The unit will effectively cut small trees up to 7.5 cm (3 in) diameter using the 80 tooth 25 cm (10 in) diameter new blade.
- Before attempting to cut, ensure that the falling tree will fall away from you, and if necessary, tie a rope to the tree and have an assistant pull it in a safe direction.
- Do not attempt to “plunge cut”, i.e. using the brushcutter like an axe. It is not necessary and may cause serious damage to the brushcutter.
- Brace your feet firmly on the ground and cut with the left hand side of the blade.

NOTE

1. Always cut on full throttle.
2. Never try cutting with a blunt blade.

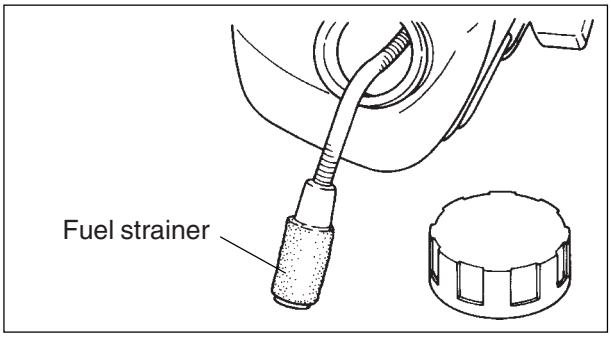
MAINTENANCE AND CARE

- ALWAYS KEEP THE UNIT CLEAN -



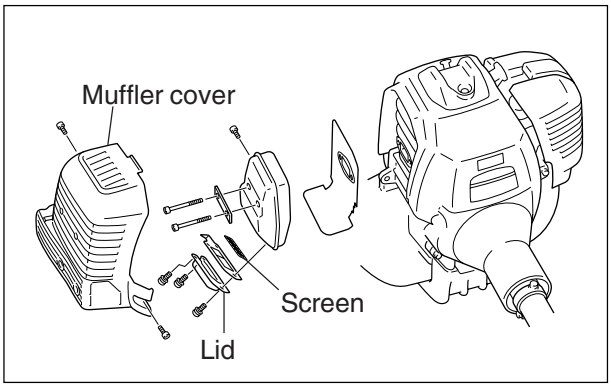
AIR FILTER

- Clean before using the unit.
  - Close choke. Loosen screws and remove air cleaner cover.
  - Remove air filter (air filter is located inside air cleaner cover).
  - Brush dirt from filter or clean with compressed air. Do not wash the air filter.
  - Reinstall air filter with cover, after installing air filter to cover.
  - Tighten screws.



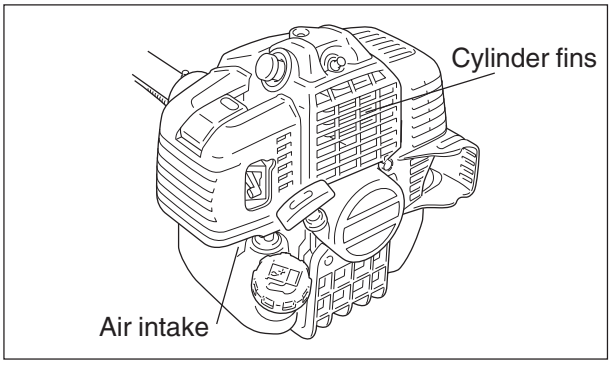
FUEL STRAINER

- Check periodically.
  - Do not allow dust to enter into fuel tank.
  - Clogged strainer will cause difficulty in starting engine or abnormalities in engine performances.
  - Pick up fuel strainer through fuel inlet port with a piece of steel wire or the like.
  - When strainer is dirty, wash it in suitable cleaning fluid or replace it.



MUFFLER AND EXHAUST PORT (SAM)

- Clean as necessary.
- Carbon deposits in cylinder exhaust port and muffler will reduce engine output.
  - Muffler can be removed by taking off muffler cover.
  - Remove spark arrestor screen from muffler.
  - Clean carbon deposits from screen and muffler components.
  - Be careful not to scratch cylinder or piston when cleaning cylinder exhaust port. Use non-ferrous plastic or wood.
  - Replace screen if it is cracked, plugged or has holes burned through.
  - Inspect gaskets, replace if damaged.
  - Assemble components in reverse order.

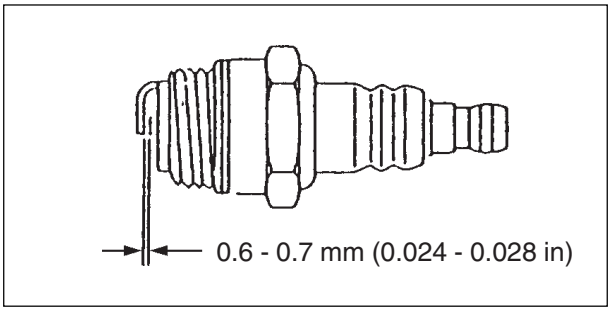


CYLINDER FINS

- Check periodically.
- Clogged fins will result in poor engine cooling.
- Remove dirt and dust from between fins to let cooling air pass easily.

CHECK FUEL SYSTEM

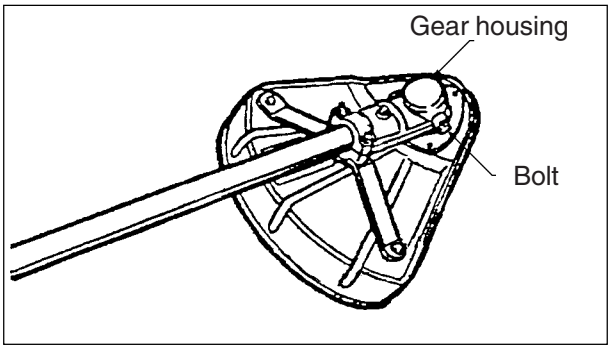
- Check before every use.
- After refuelling make sure fuel does not leak or exude from around fuel pipe, fuel grommet or fuel tank cap.
- In case of fuel leakage or exudation there is a danger of fire. Stop using the machine immediately and request your dealer to inspect or replace.



SPARK PLUG

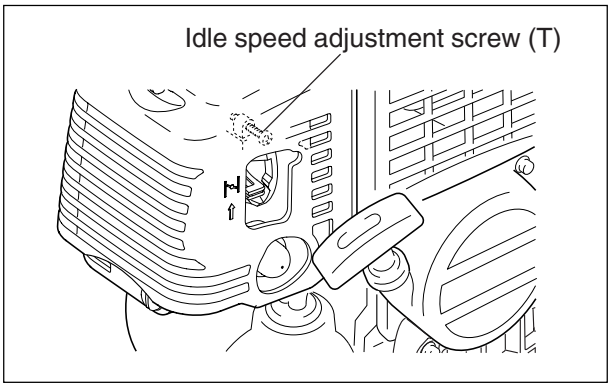
- Check periodically.
- Standard spark plug gap is 0.6 to 0.7 mm (0.024 to 0.028 in).
- Replace if either electrode is worn or if the insulator is fouled by oil or other deposits.
- TORQUE = 15 to 17 N•m (130 to 145 in•lb)

NOTE
Do not over torque.



GEAR HOUSING

- Remove the bolt every 50 hours and check.
- Replenish as necessary, but do not overfill.
  - Good quality lithium multi grease is recommendable.



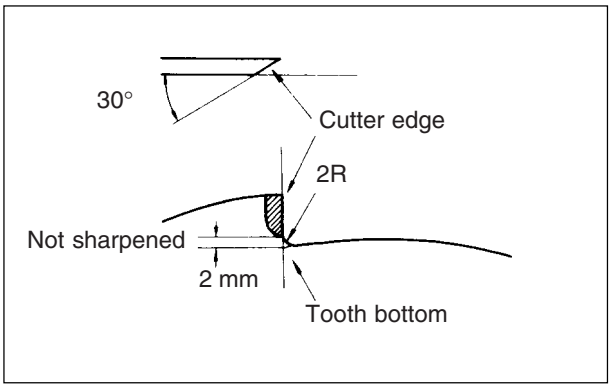
CARBURETOR ADJUSTMENT

Every unit is run at the factory and the carburetor is set in compliance with Emission Regulations, In addition.

1. Before adjusting carburetor clean or replace air filter and muffler, “Spark Arrestor Screen”.
2. Make sure the cutting attachment such as hedge clipper blades or circular saw are properly adjusted. Trimmer line should be extended to cut-off knife.
3. Start engine and run several minutes to bring to operating temperature. Flash choke twice during warm-up to clear any air from the fuel system.
4. Idle Speed Adjustment
   - Start engine, turn “idle” speed adjustment screw CW until the cutting attachment begins to turn, then turn screw out CCW until attachment stops turning. Turn screw out, CCW, an additional 1/4 turn.

WARNING ⚠ DANGER
CUTTING ATTACHMENT MUST NOT TURN OR MOVE WHEN UNIT IS IDLING.

NOTE
When starting, idling adjustment speed should be adjusted not to rotate the cutting attachment. Correct idle speed is adjusted 2,900 to 3,100 r/min. Or 1/4 turn counter clockwise from the point the cutting attachment stops moving. When there is some trouble with the carburetor, refer to your dealer.



EIGHT CUTTER BLADE

- Use only the blade designated by the manufacturer for this model.
- When crack is noticed on the blade, never use it, but replace with a new one.
- Round the tooth bottom for 1- 2 mm radius in order to avoid the crack using a round file.
  - Rounded part is not to be sharpened.
  - Sharpen each cutter equally so as to retain the balance of the blade.
  - In sharpening the edge by use of a grinder, do not cool the cutter abruptly by immersing it in water.

MAGNETO

The unit is incorporated with a CDI (Capacitor Discharge Ignition) system, which does not require adjustment of ignition timing and the contact breaker point gap. Ensure wire connections and couplers assembling.

TROUBLE SHOOTING

Poor performance of the engine and/or trimming mechanism can normally be prevented by carefully following instructions.
Poor performances can easily be corrected even by a beginner.
When the engine does not function properly check the following three (3) points first.

- Is engine compression adequate?
- Is fuel system in good condition and is enough fuel being supplied?
- Is electrical system in good condition and is spark plug operating normally?

When there is serious trouble with the unit, do not try to repair it yourself but have your distributor or dealer do it for you. For detailed **TROUBLE SHOOTING** refer to tables 1 and 2. Locate the problem on the following charts and repair as necessary.

Table 1

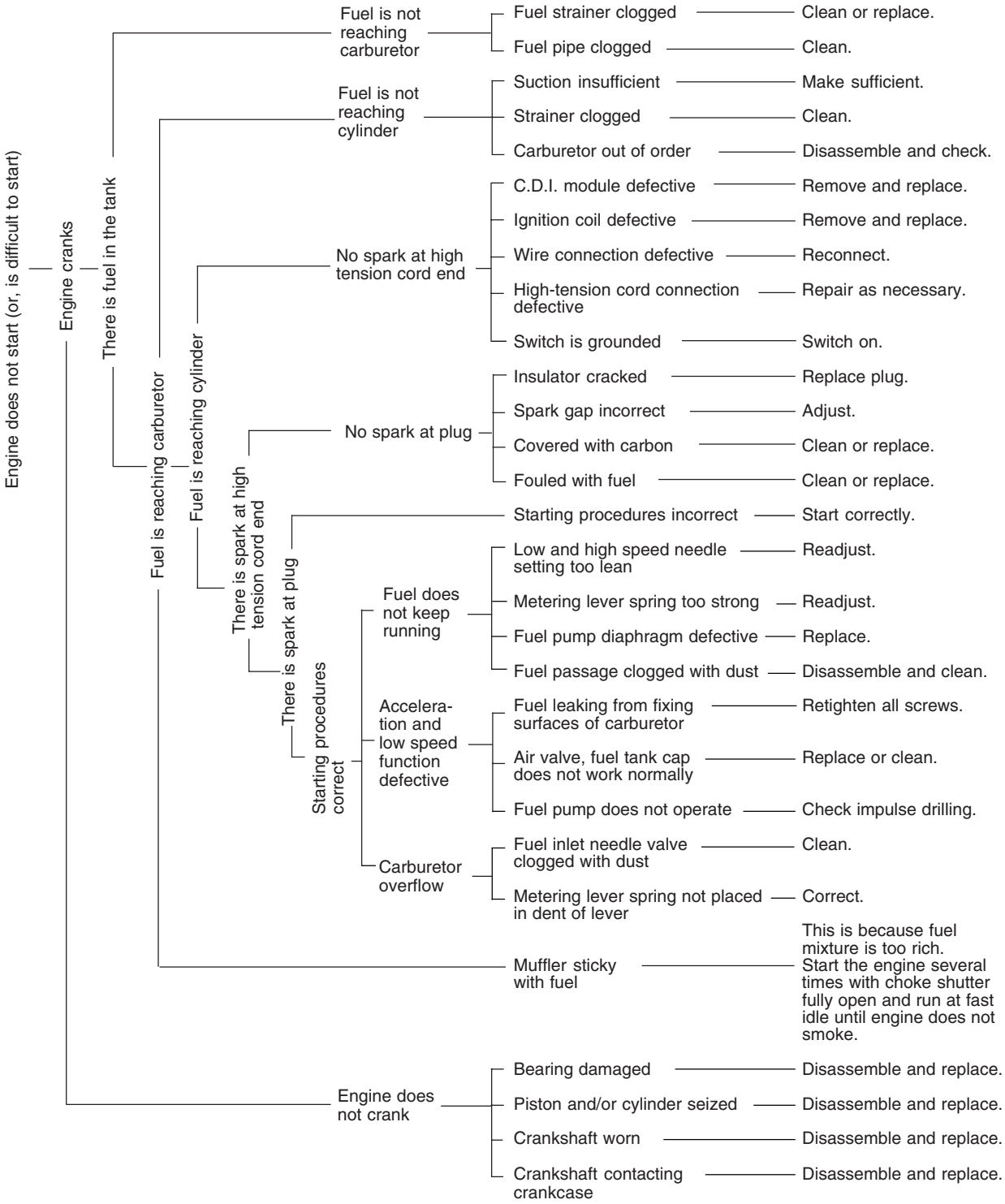
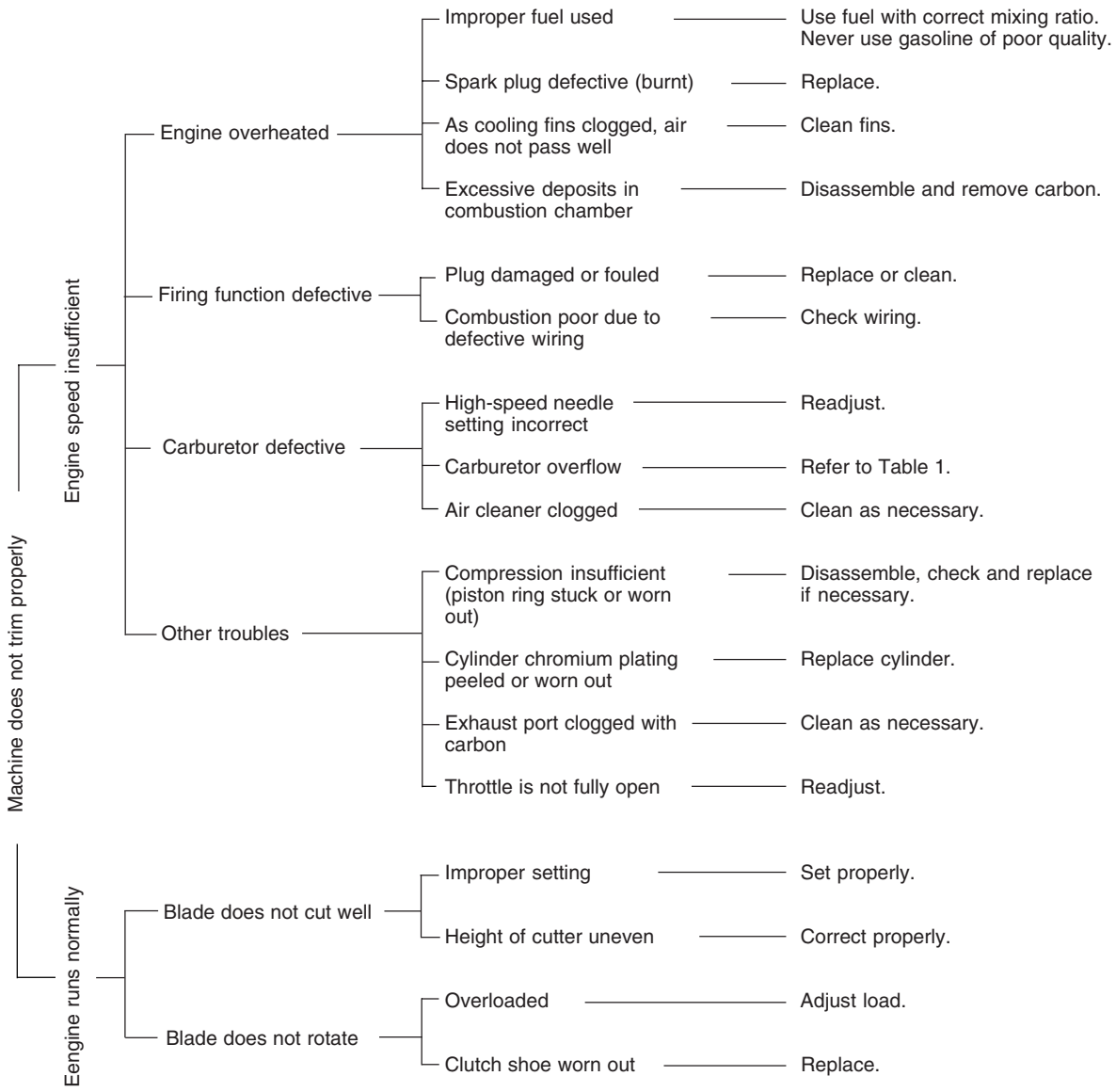

Engine does not start (or, is difficult to start)
Engine cranks
There is fuel in the tank
Fuel is reaching carburetor
Fuel is not reaching carburetor
Fuel strainer clogged
Clean or replace.
Fuel pipe clogged
Clean.
Fuel is reaching cylinder
Fuel is not reaching cylinder
Suction insufficient
Make sufficient.
Strainer clogged
Clean.
Carburetor out of order
Disassemble and check.
There is spark at high tension cord end
No spark at high tension cord end
C.D.I. module defective
Remove and replace.
Ignition coil defective
Remove and replace.
Wire connection defective
Reconnect.
High-tension cord connection defective
Repair as necessary.
Switch is grounded
Switch on.
There is spark at plug
No spark at plug
Insulator cracked
Replace plug.
Spark gap incorrect
Adjust.
Covered with carbon
Clean or replace.
Fouled with fuel
Clean or replace.
Starting procedures correct
Starting procedures incorrect
Start correctly.
Fuel does not keep running
Low and high speed needle setting too lean
Readjust.
Metering lever spring too strong
Readjust.
Fuel pump diaphragm defective
Replace.
Fuel passage clogged with dust
Disassemble and clean.
Accelera-tion and low speed function defective
Fuel leaking from fixing surfaces of carburetor
Retighten all screws.
Air valve, fuel tank cap does not work normally
Replace or clean.
Fuel pump does not operate
Check impulse drilling.
Carburetor overflow
Fuel inlet needle valve clogged with dust
Clean.
Metering lever spring not placed in dent of lever
Correct.
Muffler sticky with fuel
This is because fuel mixture is too rich. Start the engine several times with choke shutter fully open and run at fast idle until engine does not smoke.
Engine does not crank
Bearing damaged
Disassemble and replace.
Piston and/or cylinder seized
Disassemble and replace.
Crankshaft worn
Disassemble and replace.
Crankshaft contacting crankcase
Disassemble and replace.

Table 2



WARNING ⚠ DANGER

FUEL VAPORS ARE EXTREMELY FLAMMABLE AND MAY CAUSE FIRE AND/OR EXPLOSION. NEVER TEST FOR IGNITION SPARK BY GROUNDING SPARK PLUG NEAR CYLINDER PLUG HOLE, OTHERWISE SERIOUS PERSONAL INJURY MAY RESULT.

LONG TERM STORAGE

- Inspect and adjust every part of the unit.
  - Completely clean every part, and repair, if necessary.
  - Apply thin coating of oil on metal parts to prevent rust.
  - Remove the cutter head, apply sufficient oil coating and wrap up in plastic.
- Drain fuel tank, pull starter handle slowly a few times to drain fuel from carburetor.
- Pour a small amount of clean motor oil into spark plug hole, pull starter handle and then crank the engine until TOP DEAD CENTER.
- Store in a dry area, free from dust.